

REMARKS

This application contains claims 1-112, the status of which is as follows:

- (a) Claims 27-31, 33-34, 36, 66-72, 74-100, and 103-108 were previously presented.
 - (b) Claims 35, 37-40, 43-45, and 48 are as originally filed.
 - (c) Claims 1-24, 32, 49-65, and 73 were previously canceled without prejudice, and claims 41 and 46 have been currently canceled without prejudice.
 - (d) Claims 25-26, 42, 47, 101-102, and 109-112 have been currently amended.
- No new matter has been added.

Allowable subject matter

Applicants thank the Examiner for allowing claims 33, 74, 81-100, and 103-108.

Claim rejections under 35 U.S.C. 103

In the official action dated November 20, 2008, claims 25-31, 34-39, 43, 45, 48, 66-72, and 75-80 were rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 6,526,318 to Ansarinia in view of Seylaz et al., "Effect of Stimulation of the Sphenopalatine Ganglion on Cortical Blood Flow in the Rat." Claims 40 and 44 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ansarinia and Seylaz et al. and further in view of US Patent Application Publication 2002/0077687 to Ahn. Claims 41, 42, 46, and 47 were rejected under 35 U.S.C. 103(a) as being unpatentable over Ansarinia and Seylaz et al. and further in view of US Patent Application Publication 2004/0138097 to Guyuron. In the Advisory Action dated April 9, 2009, the Examiner further cited col. 7 of US Patent 5,766,605 to Sanders et al.

Applicants have amended independent claims 25 and 26 to include the additional step of "widening at least a portion of a greater palatine canal." Similar steps were previously recited in dependent claims 41 and 45, respectively, which have accordingly been canceled.

None of the cited references, including Sanders, teaches the widening of the greater palatine canal, or any other bony canal, for the insertion of any electronic device. Applicants respectfully submit that the ordinary artisan would not consider widening the greater palatine canal, at least because his surgical training and experience would not include the widening of bony canals.

Furthermore, Sanders' "bipolar needle electrode" is described as having a diameter of only 0.46 mm (col. 7, lines 36-41), which can be readily inserted into the greater palatine canal without widening. As is well known in the art, such needle electrodes do not include any circuitry, and thus have small diameters. In contrast, the canal widening recited in claims 25 and 26 enables the insertion of more sophisticated neural stimulators that include circuitry for managing the applied stimulation (e.g., setting stimulation parameters, and/or communicating with an external controller), and thus have greater diameters than the simple needle electrodes used in Sanders' experiment. The specification as filed describes widening the canal to about 2 mm (p. 27, line 24), in order to accommodate such wider neural stimulators, and/or surgical introducers for implanting such neural stimulators. Applicants' invention thus involved developing a surgical procedure that overcomes the challenges presented by the greater palatine route to the SPG for implantation of a sophisticated neural stimulator.


Applicants thus respectfully submit that claims 25 and 26 are allowable over the cited references. Applicants also draw the Examiner's attention to Applicants' Remarks submitted on March 20, 2009. Dependent claims 27-31, 34-40, 42-45, 47-48, 66-72, 75-80, 101-102, and 109-112 are also in a condition for allowance, being of narrower scope than the allowable claims from which they directly or indirectly depend.

In addition, Applicants respectfully submit that dependent claims 101 and 102 are independently patentable. Although periosteal elevators, as taught for example by Guyuron, are well known, Applicants believe that widening the greater palatine canal to facilitate passage of a stimulator therethrough is a novel and non-obvious use of such elevators, which is neither taught nor suggested by Guyuron.

Applicants believe the amendments and remarks presented hereinabove to be fully responsive to all of the grounds of rejection raised by the Examiner. In view of these amendments and remarks, Applicants respectfully submit that all of the claims in the present application are now in order for allowance. Notice to this effect is respectfully requested.

Respectfully submitted,

RatnerPrestia



Jacques L. Etkowicz, Reg. No. 41,738
Attorney for Applicants

JLE/kpc

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P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

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